WHAT IS CLAIMED IS:

1. A lithographic printing plate precursor comprising:

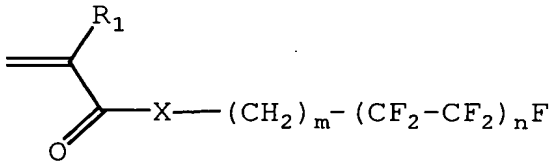
a support; and

an image-forming layer including a fluoroaliphatic group-containing copolymer,

wherein the fluoroaliphatic group-containing copolymer contains a repeating unit corresponding to monomer (i) and a repeating unit corresponding to monomer (ii):

(i) a fluoroaliphatic group-containing monomer represented by formula (1) below, and

(ii) at least one of a poly(oxyalkylene) acrylate and a poly(oxyalkylene) methacrylate:



(1)

wherein R_1 represents a hydrogen atom or a methyl group; X represents an oxygen atom, a sulfur atom or $-N(R_2)-$; m represents an integer of 1 to 6; n represents an integer of 2 or 3; and R_2 represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms.

2. The lithographic printing plate precursor as described in claim 1, wherein the alkylene group in each of the poly(oxyalkylene) acrylate and the poly(oxyalkylene)

methacrylate has 2 to 4 carbon atoms.

3. The lithographic printing plate precursor as described in claim 1, wherein the poly(oxyalkylene) group in each of the poly(oxyalkylene) acrylate and the poly(oxyalkylene) methacrylate has a weight average molecular weight of 250 to 3,000.

4. The lithographic printing plate precursor as described in claim 1, wherein the fluoroaliphatic group-containing copolymer contains the repeating unit corresponding to the monomer (i) in an amount of 5 mol% or more, based on total amount of repeating units in the polymer.

5. The lithographic printing plate precursor as described in claim 1, wherein the fluoroaliphatic group-containing copolymer contains the repeating unit corresponding to the monomer (ii) in an amount of 10 mol% or more, based on total amount of repeating units in the polymer.

6. The lithographic printing plate precursor as described in claim 1, wherein the fluoroaliphatic group-containing copolymer has a weight average molecular weight

of 3,000 to 100,000.

7. The lithographic printing plate precursor as described in claim 1, wherein the image forming layer includes the fluoroaliphatic group-containing copolymer in an amount of 0.005 to 8 weight%, based on the weight of the image forming layer.

8. The lithographic printing plate precursor as described in claim 1, wherein the fluoroaliphatic group-containing copolymer contains:

the repeating unit corresponding to monomer (i);

the repeating unit corresponding to monomer (ii); and

a repeating unit corresponding to at least one of a poly(oxyethylene) acrylate and a poly(oxyethylene) methacrylate.

9. The lithographic printing plate precursor as described in claim 1, wherein the support is an aluminum substrate, and the image forming layer is a photosensitive layer containing a light-heat converting agent and a binder resin, in which the photosensitive layer can increase or decrease in the solubility in an alkaline developer upon exposure to laser beams.

10. The lithographic printing plate precursor as described in claim 1, wherein the support is an aluminum substrate, and the image forming layer is a photosensitive layer containing a light-heat converting agent, a heat radical generator and a radical polymerizable compound, in which the photosensitive layer can decrease in the solubility in an alkaline developer upon exposure to laser beams.

11. A lithographic printing plate precursor comprising:

a support; and

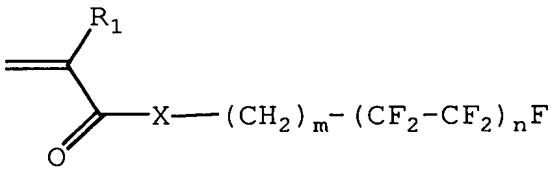
an image-forming layer including a fluoroaliphatic group-containing polymer,

wherein the fluoroaliphatic group-containing polymer contains a repeating unit corresponding to monomer (i), a repeating unit corresponding to monomer (ii) and a repeating unit corresponding to monomer (iii):

(i) a fluoroaliphatic group-containing monomer represented by formula (1) below,

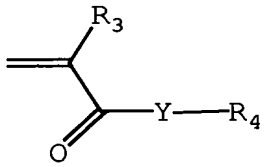
(ii) at least one of a poly(oxyalkylene) acrylate and a poly(oxyalkylene) methacrylate, and

(iii) a monomer: copolymerizable with the monomers (i) and (ii); and represented by formula (2) below:



(1)

wherein R_1 represents a hydrogen atom or a methyl group; X represents an oxygen atom, a sulfur atom or $-N(R_2)-$; m represents an integer of 1 to 6; n represents an integer of 2 or 3; and R_2 represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms,



(2)

wherein R_3 represents a hydrogen atom or a methyl group, Y represents a divalent linking group, R_4 represents a linear, branched or cyclic alkyl group having 4 to 20 carbon atoms.

12. The lithographic printing plate precursor as described in claim 11, wherein the alkylene group in each of the poly(oxyalkylene) acrylate and the poly(oxyalkylene) methacrylate has 2 to 4 carbon atoms.

13. The lithographic printing plate precursor as described in claim 11, wherein the poly(oxyalkylene) group in each of the poly(oxyalkylene) acrylate and the poly(oxyalkylene) methacrylate has a weight average molecular

weight of 250 to 3,000.

14. The lithographic printing plate precursor as described in claim 11, wherein the fluoroaliphatic group-containing copolymer contains the repeating unit corresponding to the monomer (i) in an amount of 5 mol% or more, based on total amount of repeating units in the polymer.

15. The lithographic printing plate precursor as described in claim 11, wherein the fluoroaliphatic group-containing copolymer contains the repeating unit corresponding to the monomer (ii) in an amount of 10 mol% or more, based on total amount of repeating units in the polymer.

16. The lithographic printing plate precursor as described in claim 11, wherein the fluoroaliphatic group-containing copolymer contains the repeating unit corresponding to the monomer (iii) in an amount of 3 mol% or more, based on total amount of repeating units in the polymer.

17. The lithographic printing plate precursor as described in claim 11, wherein the fluoroaliphatic group-

containing copolymer has a weight average molecular weight of 3,000 to 100,000.

18. The lithographic printing plate precursor as described in claim 11, wherein the image forming layer includes the fluoroaliphatic group-containing copolymer in an amount of 0.005 to 8 weight%, based on the weight of the image forming layer.

19. The lithographic printing plate precursor as described in claim 11, wherein the fluoroaliphatic group-containing copolymer contains:

the repeating unit corresponding to monomer (i);

the repeating unit corresponding to monomer (ii);

the repeating unit corresponding to monomer (iii); and

a repeating unit corresponding to at least one of a poly(oxyethylene) acrylate and a poly(oxyethylene) methacrylate.

20. The lithographic printing plate precursor as described in claim 11, wherein the support is an aluminum substrate, and the image forming layer is a photosensitive layer containing a light-heat converting agent and a binder resin, in which the photosensitive layer can increase or decrease in the solubility in an alkaline developer upon

exposure to laser beams.

21. The lithographic printing plate precursor as described in claim 11, wherein the support is an aluminum substrate, and the image forming layer is a photosensitive layer containing a light-heat converting agent, a heat radical generator and a radical polymerizable compound, in which the photosensitive layer can decrease in the solubility in an alkaline developer upon exposure to laser beams.